Abstract

The invention relates to a method of designing the geometrical size of a hydraulic element in a hydraulic system composed of hydraulic elements. The method has access to: a geometrical parameter representing geometrical size and shape of the hydraulic element and a flow resistance parameter representing flow resistance properties of the hydraulic element; and a numerical representation of simulated measures of the flow. The numerical representation of the hydraulic system is open to changes in a calculated flow capacity through changes in a value of the flow resistance parameter. The method comprises the steps of: simulating measures of the flow at discrete instances of time and at discrete instances of space of the hydraulic system; regulating a calculated value of the flow capacity in response to a design criterion by adjusting the flow resistance parameter to obtain a regulated value of the flow capacity; and calculating the value of a geometrical size of the hydraulic element from the regulated value of the flow capacity and a specified flow resistance parameter. Additionally, the method relates to a computer system and a computer readable medium.

Thereby the effect of numerical instabilities is avoided or at least diminished.

(fig. 4 should be published)